**Derived Units Entrance Card**

1. What is the density of a block of marble that occupies 310. cm3 and has a mass of 853 grams?
2. What is the volume, in cubic meters, of a rectangular solid that is 0.25 m long, 6.1 m wide, and 4.9 m high?
3. Which of the solids listed below will float on water?
4. Which of the liquids will sink in milk?

Densities of some Familiar Materials

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| --- | --- | --- | --- |
| Solids | Density at  20°C (g/cm3) | Liquids | Density at  20°C(g/mL) |
| cork | 0.24\* | Gasoline | 0.67\* |
| Butter | 0.86 | Ethyl alcohol | 0.791 |
| Ice | 0.92¤ | Kerosene | 0.82 |
| sucrose | 1.59 | Turpentine | 0.87 |
| Bone | 1.85\* | Water | 0.998 |
| Diamond | 3.26\* | Sea water | 1.025\*\* |
| copper | 8.92 | Milk | 1.031\* |
| lead | 11.35 | mercury | 13.6 |

\*typical density

\*\*measured at 15°C

¤ measured at 0°C